**In the Claims**

This listing of claims will replace all prior versions, and listings, of claims.

**Listing of Claims**

1. (Currently amended) A method for building a recovery model, the recovery model being used to reduce a zipper of image data, said method comprising:

producing a plurality of outputted signals according to a plurality of brightness, wherein the brightness are not all the same;

measuring a plurality of differences according to the outputted signals and a plurality of estimated signals corresponding to the brightness, wherein the plurality of estimated signals vary in magnitude in relation to the brightness intensity;

establishing an interference model according to the differences, wherein the interference model is a mathematical model that describes an effect of distortion on a real signal caused by a mixing of outputs from a first image sensor and a second image sensor; [[and]]

producing the recovery model according to the interference model, such that the recovery model is a mathematical inverse of the interference model; and

applying the recovery model to the a distorted signal to generate a recovered signal, wherein the recovered signal has reduced zipper of the image data.

2. (Original) The method of claim 1, wherein the step of producing the recovery model through a mathematic method according to the interference model.

3. (Previously presented) The method of claim 2, wherein the mathematic method is Neural Network or Fuzzy Control or Matrix model or Nearly Decoupled Model.

4. (Original) The method of claim 3, wherein the Neural Network method comprises:

setting a tolerance value;

inputting a plurality of input data into an initial model;

producing an output data from the initial model;

modifying the initial model according to a difference of the output data and the input data; and

outputting the modified model as the recovered model.

5. (Currently Amended) A method for improving a quality of digital image data through a recovery model, the method comprising:

receiving a pixel data of the digital image data;

calculating the pixel data by the recovery model according to a difference of the pixel data and at least one adjacent pixel data, wherein the recovery model is a mathematical inverse of a model that describes an effect of distortion on a real signal caused by a mixing of outputs from an odd image sensor of a CCD (charge coupled device) and an even sensor of the CCD; and

producing a recovered image data from a plurality of calculated pixel data, wherein the quality of the recovered image data is better than that of the digital image data.

6. (Original) The method of claim 5, wherein the zipper of the recovered image data is not as serious as that of the digital image data.

7. (Currently Amended) The method of claim 5, wherein a step of producing the recovery model comprises:

producing a plurality of outputted signals according to a plurality of brightness, wherein the brightness are not all the same;

measuring a plurality of differences according to the outputted signals and a plurality of estimated signals corresponding to the brightness, wherein the plurality of estimated signals vary in magnitude in relation to the brightness intensity;

establishing an interference model according to the differences, wherein the interference model is a mathematical model that describes an effect of distortion on a real signal caused by a mixing of outputs from a first image sensor and a second image sensor; [[and]]

producing the recovery model according to the interference model; and

using the recovery model to reduce the zipper of image data.

8. (Original) The method of claim 7, wherein the step of producing the recovery model through a mathematic method according to the interference model.

9. (Previously presented) The method of claim 8, wherein the mathematic method is Neural Network or Fuzzy Control or Matrix model or Nearly Decoupled Model.

10. (Original) The method of claim 9, wherein the Neural Network comprising:

setting a tolerance value; inputting a plurality of input data into an initial model;

producing an output data from the initial model; modifying the initial model according to a difference of the output data and the input data; and

outputting the modified model as the recovered model.

11. (Currently Amended) An apparatus for reducing a zipper of image data, comprising:

a recovery module for storing a plurality of recovery parameters, the recovery parameters are corresponding to the zipper, wherein the recovery model is a mathematical inverse of a model that describes an effect of distortion on a real signal caused by a mixing of outputs from a first image sensor and a second image sensor; and

a processing logic, coupled to the recovery module, for receiving a digital image data, and calculating the digital image data with the recovery parameters to produce a recovered image data, wherein the zipper of the recovered image data is not as serious as that of the digital image data.

12. (Currently Amended) The apparatus of claim 11, wherein the step of producing the recovery model comprises:

producing a plurality of outputted signals according to a plurality of brightness, wherein the brightness are not all the same;

measuring a plurality of differences according to the outputted signals and a plurality of estimated signals corresponding to the brightness, wherein the plurality of estimated signals vary in magnitude in relation to the brightness intensity;

establishing an interference model according to the differences, wherein the interference model is a mathematical model that describes an effect of distortion on a real signal caused by a mixing of outputs from a first image sensor and a second image sensor; [[and]]

producing the recovery model according to the interference model; and

using the recovery model to reduce the zipper of image data.

13. (Original) The method of claim 12, wherein the step of producing the recovery model through a mathematic method according to the interference model.

14. (Previously presented) The apparatus of claim 13, wherein the mathematic method is Neural Network or Fuzzy Control or Matrix model or Nearly Decoupled Model.

15. (Original) The apparatus of claim 11, wherein the processing logic is configured to perform the following functions:

receive a pixel data of an image data;

calculate the pixel data by the recovered model according to a difference of the pixel data and at least one adjacent pixel data; and

produce the recovered image data from the calculated pixel data.

16. (Original) The apparatus of claim 15, wherein the processing logic is a hardware or software or firmware.

17. (New) The method of claim 1, wherein the step of producing a plurality of outputted signals more specifically comprises producing a plurality of measured voltages, each of the measured voltages corresponding to an input brightness, and wherein the step of measuring a plurality of differences according to the outputted signals more specifically comprises measuring a voltage difference between the measured voltages and a theoretical voltage corresponding to the input brightness.

18. (New) The method of claim 7, wherein the step of producing a plurality of outputted signals more specifically comprises producing a plurality of measured voltages, each of the measured voltages corresponding to an input brightness, and wherein the step of measuring a plurality of differences according to the outputted signals more specifically comprises measuring a voltage difference between the measured voltages and a theoretical voltage corresponding to the input brightness.

19. (New) The method of claim 1, wherein the first and second image sensors are an odd image sensor of a CCD (charge coupled device) and an even image sensor of the CCD.